REMARKS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested. Claims 5, 10, 14 and 18 are amended without prejudice or disclaimer.

Applicants Comments to the Response to Arguments

Applicants continue to be somewhat confused by the issue raised by the Examiner under 35 U.S.C. §112, first paragraph rejection. Applicants note that there is no legal requirement that paragraph [0034] restrict the focus node from being different. It is sufficient that the specification disclose or teach that the new focus node can be different from the current focus node. The limitation of the two nodes being different is recited in the claims. In other words, Applicants submit that it appears that the position in the Office Action is that the specification cannot merely show examples of claim limitations but must also expressly be restricted to the same scope as the claims. Applicants submit that there is no foundation for this position. In other words, the specification may show several examples of a particular concept, and if the claim language is limited to one of those concepts, then there is sufficient support in the specification and the claim scope. Notwithstanding our traversing this position, Applicants have amended paragraph [0034] to recite that the new focus node 216 differs from the current focus node 208. Applicants respectfully submit that this concludes our discussion on this issue.

Claim Objections

The Office Action objects to claim 18 because of informalities. Applicants have amended claim 18 according to the suggested language in the Office Action. Accordingly, Applicants respectfully request withdrawal of the claim 18 objection.

Rejection of Claims 1, 5, 10, 14 and 18 Under 35 U.S.C. §112

The Office Action rejects claims 1, 5, 10, 14 and 18 under 35 U.S.C. §112, first

paragraph, as failing to comply with the written description requirement. Although Applicants

traverse this rejection inasmuch as the Office Action concedes that the written description does

disclose the concept that the new focus node is different from the current focus node. However,

Applicants have amended the specification to expressly state that the new focus node is different

from the current focus node. Accordingly, Applicants respectfully request withdrawal of this

rejection.

Rejection of Claims 5 and 14 Under 35 U.S.C. §101

The Office Action rejects claims 5 and 14 under 35 U.S.C. §101 because the claims

appear to be directed to a software embodiment and not to a hardware embodiment. Applicants

have amended claims 5 and 14 to recite that the dialog manager performs the steps via a

processor. Accordingly, Applicants respectfully request withdrawal of this rejection.

With regards to claims 10-14, Applicants have amended claim 10 to recite that the

method comprises performing at least one of the following steps via a processor. Accordingly,

Applicants respectfully submit that these claims now comply with 35 U.S.C. §101.

With regards to claims 5 and 10 as not producing a useful, concrete and tangible result,

Applicants note that the Office Action on page 6 concedes that claims 6, 7, 11 and 12 do

represent useful, concrete and tangible results. Accordingly, Applicants have made an

amendment to claims 5 and 10 to recite an additional step which includes "depending on the

status of the new focus node, identifying the user need or prompting the user to disambiguate

between descendent nodes of the new focus node and returning to step (b)." Accordingly,

Applicants respectfully submit that the claim recites the necessary result with a limitation which

is sufficiently similar to claim 6 at least with respect to providing a useful, concrete and tangible result. Accordingly, Applicants respectfully request withdrawal of this rejection.

Rejection of Claims 1-4 and 14-21 Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-4 and 14-21 under 35 U.S.C. §103(a) as being unpatentable over Chinn et al. (U.S. Patent Publication No. 2003/0115289) ("Chinn et al.") in view of Fratkina (U.S. Patent Publication No. 2001/0049688) ("Fratkina") in view of Norton et al. (U.S. Patent No. 6,510,411) ("Norton et al."). Applicants respectfully traverse this rejection and submit that even if combined, these references fail to teach each limitation of the claims and furthermore, Applicants submit that one of skill in the art would not have sufficient motivation or suggestion to combine these references.

Applicants first shall address why the references, even if combined, fail to teach each limitation of the claims. Applicants first turn to claim 1. Applicants note that this claim is particularly focused on the process that occurs based on a user utterance in response to a prompt. For example, when the appropriate scope and limitations that are recited in the claim are properly analyzed, Applicants submit that there are numerous limitations that are not taught or suggested by Chinn et al.

For example, claim 1, step (a) recites "based on a received user utterance in response to a prompt, establishing at least one lit node and assigning a current focus node in a rooted tree." Applicants submit that the Office Action cites paragraph [0097] and [0057] as teaching this limitation. However, paragraph [0097] teaches a user utterance but does not teach that it is in response to the system asking a question, i.e., there is no prompt. Here, the user simply wants to access San Francisco's weather. So, the user states "Is it raining in San Francisco?". Furthermore, paragraph [0057], which references the root node 1.0 in Figure 2, is taught as completing the disclosure of this limitation. However, Applicants respectfully traverse this

conclusion inasmuch as paragraph [0057] introduces the block diagram of the example

navigation tree of Figure 2. Here, the data structure 200 is described. Root node 1.0 is simply

defined as the common hierarchical node for all of the nodes of the data structure 200. There is

nothing in this reference which identifies that the root node 1.0 is "assigned [as] a current focus

node in a rooted tree" based on a received user utterance in response to a prompt. The root node

1.0 is simply the root node in the data structure 200. Accordingly, because the root node 1.0 is

not assigned based on the received user utterance in response to a prompt, Applicants submit that

this limitation is not taught or suggested in the reference.

Next, Applicants also note that there is no teaching of establishing at least one lit node in

the rooted tree based on a received user utterance in response to the prompt. Therefore, this

feature is not taught or suggested in the reference.

Next, Applicants discuss step 1 (b). Here, the limitation requires an analysis of what

occurs if there is a single direct descendent of the focus node that is lit. Once the current focus

node is assigned and at least one lit node established, then there is an analysis based on what

occurs if there is a single direct descendent of the focus node that is lit. Applicants note that

inasmuch as step 1 (a) is not taught, then it becomes very difficult to establish that the remaining

steps are taught. The Office Action on page 7, rather than citing direct teachings of the

reference, speculates regarding what a user may do. In other words, Applicants respectfully

submit that the analysis is not based on the actual teachings and interactions based on user

utterances in response to prompts, but rather is based on speculation of how a system might

interact with the system. In order to find an equivalent teaching of step 1 (b), the Office Action

states "if the user wants portfolio information then this would be a focus node 2.1, which is a

direct descendent from root node 1.0." Applicants submit that this analysis speculates that the

user asks for portfolio information associated with node 2.1 of Figure 2.

However, what the analysis does in this respect is begin to <u>teach away</u> from what is recited in claim 1. In other words, the Office Action has already cited a user utterance in citing paragraph [0097]. Now, rather than continuing with the limitation of claim 1 which is still based on <u>the</u> received user utterance, the Office Action speculates about yet another utterance associated with the portfolio node. The problem with this analysis is that the claim requires the evaluation done on the structure within the rooted tree based on the established at least one lit node and assigned current focus node. By introducing a speculative additional user utterance which would be focused on the portfolio node 2.1 of Figure 2, Applicants submit that the analysis veers away from the limitations of the claims and thus is not persuasive. This portion of the analysis essentially seeks to establish a new focus node in node 2.1 via an additional input from the user. However, this is not what claim 1 recites. Claim 1 recites if there is a single direct descendent of the focus node that is lit, then assigning a lit direct descendent of the current focus node as a new focus node (without any need for additional user utterances). Therefore, Applicants respectfully submit that our basic point here is that a speculative approach to additional user input should not be used to equate the explicit claim limitations to the teachings of Chinn et al.

Next, with respect to limitation 1 (b) (1), the Office Action again assumes yet an additional user prompt. Here, the Office Action cites paragraph [0057] again and notes "if the user selected the portfolio then this would become the focus node and prompt more questions." Again, this speculates an additional user input of selecting the portfolio node. This additional user prompt is not recited in the claim and therefore does not teach step 1 (b) (1).

Next, step 1 (b) (2) requires that if the new focus node is a leaf node, then identifying the user need. Here, the Office Action states "if during traversal the focus node went from a current focus node 2.1 to a new focus node 3.1.3, the user information is identified and presented.

Although not specifically disclosed in the reference. Such can be inferred as shown in a similar example as in [0097]-[0100]." Applicants respectfully submit that the Office Action here clearly concedes that this is not specifically disclosed in the reference. However, in order to infer such an approach, the Office Action must speculate as to additional user utterances in at least one or two instances. Here, Applicants submit that the speculative approach necessarily moves away from the express limitations of the claims. For example, the analysis on page 8 requires that the change from a current focus node 2.1 to a new focus node 3.1.3 occurs "during traversal". Applicants submit that this approach again is speculative with regards to what Chinn et al. actually teach. Paragraphs [0097]-[0100] disclose a user asking if it is raining in San Francisco and how the system prompts the user to choose between two nodes 3.2.1.1 and 3.3.1. In other words, paragraphs [0097]-[0100] essentially teach an example wherein is a user asks "is it raining in San Francisco" and in searching the navigation tree, the system discribes there are two nodes (3.2.1.1. and 3.3.1) that include the key word San Francisco. The user query is a match for both nodes. To resolve the multiple match problem, they teach that the user if prompted to choose between two nodes. An exemplary prompt is "do you want San Francisco traffic or San Francisco weather" and then the user responds by selecting between the categories. Applicants submit that the interaction here necessarily involves the system prompting the user after receiving the user input. However, by citing these paragraphs, Applicants note that the claim does not require another system prompt in step 1 (b) (2). The system only needs to identify the user need. Accordingly, Applicants respectfully submit that for this particular limitation, the reference simply fails to teach the limitation and it cannot be inferred that this is taught without the additional speculative requirement of other user utterances or prompts.

Next, limitation 1 (b) (3) recites that if the new focus node is not a leaf node, <u>then</u> prompting the user to disambiguate between the descendent node and the new focus node and

then returning to step (a). Here, the Office Action states "it can be interpreted from Figure 2, that since portfolio 2.1 is the focus node and is not a leaf node, then questions would be asked to the user to determine which information is to be extracted an presented." Applicants respectfully traverse this analysis because the basis for the conclusion that "portfolio 2.1 is the focus node" is the speculative requirement of an additional user input. Please recall that originally the analysis in the Office Action required the current focus node to be the root node 1.0 discussed in paragraph [0057]. However, the only mechanism which has been shown in the Office Action to establish portfolio 2.1 as the new focus node is a speculative additional user utterance. Applicants submit that such a limitation is not found in the claim and therefore, the foundation of the analysis on page 8, section (3) is inappropriate speculation. Therefore, Applicants respectfully submit that the mechanism by which a new focus node is established in claim 1 differs from what is taught by Chinn et al. (in which they fail to teach anything regarding this step) and also differs from the analysis in the Office Action. Accordingly, Applicants submit that this feature is not taught or suggested in the reference.

Claim 1 next recites step 1 (c) which requires several sub steps to occur if there is a plurality of direct descendents of the current focus node that are lit. Again, Applicants highlight that this is a condition that is based on the establishment of at least one lit node and the assignment of a current focus node in a rooted tree that is based on a received user utterance in response to a prompt. Applicants note that the analysis in the Office Action returns back to the current focus node being the root node 1.0 of Figure 2. In this case, the limitation that has been highlighted throughout the prosecution of this case occurs. Step 1 (c) (1) recites assigning a lowest common ancestor node of all lit nodes as a new focus node wherein the new focus node is different from the current focus node. Here, the analysis again simply requires that the root node become the new focus node (although it is the same node as the old focus node) so as they ask

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another question to the user for disambiguation. Applicants maintain our traversal of this analysis and shall explain further why this is not taught by Norton et al.

With respect to the teachings of Norton et al., Applicants respectfully submit that they fail to teach the concept of a new focus node that is different from a current focus node. Fundamentally, Applicants submit that Norton et al. is also non-analogous to the other references and to the present application. While Applicants acknowledge that Norton et al. relate to a dialog manager in an interactive voice response system, Applicants submit that its task model shown in Figure 2B does not operate or function in the same way such that it can teach a new focus node that is different from the current focus node. In other words, we note that the at least one lit node and assigned current focus node in claim 1 is in a rooted tree that is based on a received user utterance in response to a prompt. Applicants note that what is asserted on page 10 is that Figure 2B of Norton et al. with the role sets 215, 220 and 211 are shown with a top level task 210 as being a previous focus node. In other words, it appears that the opinion of the Examiner is that because role sets 215, 220 and 211 are different from the top level tasks 210, that Norton et al. somehow teach the concept of the new focus node being different from the current focus node. Applicants respectfully submit that there is simply no analysis with regards to how one determines, for example, that role set 211, or 215 or 220 is somehow assigned as a new focus node after the assignment of the top level task 210 as being the current focus node. There is no analysis in the Office Action with regards to user utterances. Applicants respectfully submit that simply the citation to different nodes in the task model 200 is insufficient to establish this particular claim limitation. Indeed, it could be argued that Figure 2 of Chinn et al. teach exactly the same thing. In other words, root node 1.0 is one node with other different nodes in the tree-portfolios 2.1, Dow Jones 3.1.1, weather 2.3 and so forth. There are other nodes that differ from the root 1.0 node as well. In other words, there is nothing new that is articulated in

the Office Action with respect to Figure 2B of Norton et al. other than it has a multi-node tree

structure. Applicants indeed submit that the discussion and explanation of what the task model

200 is shows that it differs from the present invention and is unlikely to be combined with Chinn

et al. This provides a transition to our second argument.

Applicants respectfully submit that one of skill in the art would simply not have sufficient

motivation or suggestion to combine these references. The task model of Norton et al. is a tree

wherein nodes of the tree represent tasks/sub-tasks relationships and for which variables are

assigned valuables in the course of the dialog. Each variable has a domain over appropriate

values. See column 3, lines 33-38. Column 7 introduces the block diagram of the task model in

Figure 2B and explains that this task model is utilized as part of a process for developing a call

flow or dialog flow for use in a spoken dialog system. The task model is a frame work

describing the task specific information needed to perform a top level task. Therefore, what

occurs is that using this task oriented dialog model, Norton et al. teach that these various inter-

related tasks can be used to create the call flow of the spoken dialog system. Applicants

respectfully submit that this fundamentally differs from the tree structure of Figure 2. Simply

because Norton et al. and Chinn et al. both show a tree structure does not necessarily make these

references analogous or that one of skill in the art would find sufficient motivation or suggestion

to combine these references. We note fundamentally that Norton et al. teaches that their task

oriented dialog model is a development tool that is used prior to the implementation of a IVR

system. See Abstract. Therefore, we note that no dialog system even exists (yet) and it is a tool

that is used by developers for the dialog manager.

In contrast, Chinn et al. disclose in their navigation tree of Figure 2 an exemplary data

structure with nodes that are organized into categories. The data structure 200 has in each node

one or more keywords that define the content or the order of a node within the data structure. It

is a semantic representation of one or more webpages that service interactive menu dialogs to

support voice-based searches by users. Content nodes include content from a webpage. The

content is included in a node such that when a user visits a node the content is presented to the

user. The routing nodes implement options that can be selected to visit other nodes. They

explain that routing nodes may provide prompts for directing the user to navigate within the tree

to access content nodes. Thus, routing nodes can link the content of a webpage in a meaningful

way. See paragraphs [0057] - [0059]. Paragraph [0091] explains that the user query is received

and the system recognizes the key words and then the next step is to determine which node in the

navigation tree best matches the query. In other words, the tree shown in Figure 3 of Chinn et al.

is clearly not a tool that is used to develop a dialog manager but is a database in and of itself that

is searched in response to a user query. Applicants respectfully submit that one of skill in the art

in the area of speech recognition would recognize the fundamental differences between these two

references. For example, even the Abstract of Chinn et al. makes clear that this is a run time

used system. In other words, when the user provides an utterance, the system recognizes search

keywords in the query, searches the nodes to find a node with one or more keywords that best

matches the search keyword and then provides the content of the visited node. Conceptually,

this fundamentally differs from Norton et al. in which the task model 200 is used to define tasks

and concepts which rollsets having sub-tasks of a top level task and other sets of concepts that

are used to structure an IVR system. Blending nodes from Norton et al.'s tree into Chinn et al.'s

tress would be unworkable without a substantial redesign and modification.

With all of these discussions in mind, Applicants address the arguments on page 10 of the

Office Action in which the Office Action states "the example provided by Chinn shows a simple

task model. However, it would have been obvious to use a more complicated task model as

shown by Norton. Hence, the use of a complex task model to the example provided by Chinn

would have enabled a new focus node to be assigned based on the level of the task and possible

disambiguation that may be necessary as a result of multiple matches found as presented by

Chinn in pargraphs [0099] and [0100]."

Based on our discussion of the actual teachings of the references and their suggestive

power, Applicants submit that there are several problems with the analysis on page 10. First, we

have established that Chinn et al. do not show a "task model". The Office Action is incorrect by

characterizing the tree of Figure 2 as a "task model". There are no tasks involved in the data

structure of Figure 2. For example, as cited above, paragraph [0059] explains that the nodes

contain content nodes from webpages. While there is a hierarchical structure to the data

structure 200 in Figure 2 of Chinn et al., Chinn et al. simply does not show a "simple task

model". Therefore, Applicants traverse the basis upon which the obviousness analysis is made.

Applicants submit that basic foundation upon the obviousness conclusion is made is that

it would be obvious to use a more complicated task model shown by Norton et al. in the "simple

task model" of Chinn et al. Inasmuch as Chinn et al. fail to teach a task model but a very

fundamentally different data structure, in which the information is in each node fundamentally

differs from the Norton et al. model. Applicants submit that it would not be obvious to blend the

teachings of these references in the manner suggested in the Office Action.

Finally, Applicants submit that the Office Action at the bottom of page 10 cites KSR v.

Teleflex, Rationales B, D and E. Applicants note that MPEP 2141, III, Rationales B, D and E do

not necessarily fit in the present situation. We note that KSR involved a very simple technology

in which a sensor was placed onto a pedal. Applicants submit that when it is understood that the

technology involved in that case was truly easy to place one technology (the sensor) on another

simple technology (the pedal), it becomes clear that it is more difficult to apply these principles

to the present case. For example, rationales which can support a conclusion of obviousness according to <u>KSR</u> include (B) simple substation of one known element for another to obtain predictable results. Applicants submit that it would become difficult to simply substitute in whole or in part pieces of the task classification model of Figure 2B of Norton et al. into the data structure of Chinn et al. The nodes are used for entirely different purposes and therefore, Applicants respectfully submit that unlike the combining of a sensor and a pedal in <u>KSR</u>, substituting a known element into another to obtain predictable results simply would not be persuasive in the present case. In other words, if one were to take the rollsets 211, 215 and 220 as nodes within the task model of Figure 2B and insert those into various locations of the data structure of Chinn et al.'s Figure 2, then it would be completely unworkable and would yield unpredictable results inasmuch as the structure of each of those nodes is so clearly fundamentally different.

Next, another rationale is (D) in which a conclusion of obviousness may be made by applying a known technique to a known device (method or product) ready for improvement to yield predictable results. Again, are there predictable results that could occur by blending the tree structures of Norton et al. and Chinn et al.? Applicants respectfully submit that one of skill in the art would easily look at these and recognize fundamental reprogramming and restructuring that would have to take place to actually blend these structures. Furthermore, as has been noted above, inasmuch as the analysis on page 10 of Office Action of Norton et al. does no more than identify rollset nodes and the top level task 210, Applicants submit that it becomes very difficult to understand why or how one would actually apply these nodes into a data structure of Chinn et al.

Finally, rationale (E) is cited which is the "obvious to try" rationale. Here, one would have to choose from a finite number of identified, predictable solutions, with a reasonable

expectation of success. Applicants respectfully traverse this analysis as well inasmuch as it

unpersuasive that one of skill in the art would have found it obvious to take the task model 200

of Norton et al., which has as its fundamental purpose of a development tool for a dialog

manager, and incorporating those features into the teachings of the data structure shown in Chinn

et al. The blending of these two tree structures in the manner suggested in the Office Action

would not provide a predictable solution with a reasonable expectation of success. In other

words, if the tree of Norton et al., with its nodes which represent task/sub-task relationships and

for which variables are assigned values in the course of a dialog, were to be incorporated into

Chinn et al. with its nodes, which are taught as including content from such various sources such

as webpages, Applicants ask what kind of reasonable expectation of success for the combined

system to actually work would be? Applicants submit that one of skill in the art would easily

recognize that while these are tangentially related to speech processing, with a particular

understanding of their basic technology, one of skill in the art would not have a reasonable

expectation of success in combining these teachings. Applicants again note that these are much

more technical and differing in nature then the technology was in <u>KSR</u> when it is conceptually

easy to take a sensor and place it on a pedal. Accordingly, Applicants respectfully submit that

even under a broader interpretation of the law of obviousness as was used in <u>KSR</u>, one of skill in

the art would not have sufficient motivation or suggestion to combine these references.

Therefore, Applicants submit that claim 1 and its dependent claims are patentable and in

condition for allowance.

Rejection of Claims 5-13 Under 35 U.S.C. §103(a)

The Office Action rejects claims 5-13 under 35 U.S.C. §103(a) as being unpatentable

over Abella et al. (U.S. Patent No. 6,044,347) ("Abella et al.") in view of Young ("Dialog

Structure and Plan Recognition in Spontaneous Spoken Dialog", 1993) ("Young") in view of

Norton et al. Applicants respectfully traverse this rejection and submit that these claims are patentable and in condition for allowance.

With regards to claim 5, we note that the analysis on page 13 of the Office Action with respect to Norton et al. is the same as it is with regards to claim 1. In other words, Applicants note that there is simply no analysis with regards to how a new focus node would be different from a current focus node and how that would occur. Applicants submit that without this analysis in the context of the limitations of the claim, Applicants submit that this fails to present a persuasive reason why Norton et al. teaches this limitation. In other words, all that is cited is the tree structure of the task model 200 disclosed by Norton et al. and nothing in regards to how one interacts with the user and then as in step (a) of claim 5 and then generalizing by attempting to select a new focus node further from a current focus node (c) and so forth. Accordingly, Applicants submit that the analysis is not persuasive. Furthermore, Applicants submit that the combination of these references also suffers from some similar issues with regards to blending Norton et al. with the other references. Accordingly, Applicants respectfully submit that one of skill in the art should not combine these references in the manner suggested. Therefore, Applicants submit that claim 5 is patentable and in condition for allowance as well as its dependent claims as well as claim 10 and its dependent claims.

CONCLUSION

Having addressed all rejections and objections, Applicants respectfully submit that the

subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

If necessary, the Commissioner for Patents is authorized to charge or credit the **Novak, Druce &**

Quigg, LLP, Account No. 14-1437 for any <u>deficiency or overpayment</u>.

Respectfully submitted,

Date: May 4, 2009

By: _____
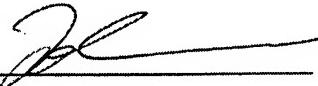
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